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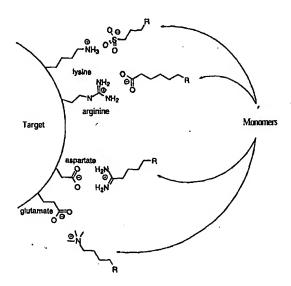
With international search report.

Before the expiration of the time limit for amending the claim: and to be republished in the event of the receipt of amendments.

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19 August 1999 (19.08.99)

(54) Title: MOLECULAR COMPOUNDS HAVING COMPLEMENTARY SURFACES TO TARGETS



(57) Abstract

Synthetic polymer complements (SPCs) are provided, as well as methods for their synthesis and use. The SPCs may have surfaces that include functional groups that are complementary to surface sites of targets such as nanostructures or macromolecular targets, and may be capable of specifically interacting with such targets. The positions of the functional groups in one embodiment are stabilized by a polymer network. The SPCs are formed by contacting the target with a set of monomers which self-assemble on the target, and then are polymerized into a network to form the synthetic polymer complement. At least a portion of the surface of the resulting SPC thus may include an imprint of the target. The complex of the SPC and the target may be the desired product. Alternatively, the target is released, for example, by controllably expanding and contracting the cross-linked network. The SPC is isolated and used in many applications.

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A. CLASSIFICATION OF SUBJECT MATTER 1PC 6 G01N33/553 C1201/00 C08G83/00 C08B37/02 According to International Patent Classification (IPC) or to both national classification and IPC 3. FIELDS SEARCHED vinimum documentation searched (classification system followed by classification symbols) IPC 6 GO1N Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) C. DOCUM | 1TS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate of the relevant passages Relevant to claim No, Category 1,2,4, M MURATA, S HIJIYA, M MAEDA, M TAKAGI: χ 18,19, "Template-Dependent Selectivity in Metal 22,32, Adsorption on Phosphoric Diester-Carrying 34,37, Resins Prepared by Surface Template 50-52 Polymerization Technique" BULLETIN OF THE CHEMICAL SOCIETY OF JAPAN, vol. 69, no. 3, 1996, pages 637-642, XP002105145 see page 637 - page 638-1,2,4, US 5 310 648 A (ARNOLD FRANCES H ET AL) X 18.19. 10 May 1994 22.32, 34,37. 50-52 17.30.45 see the whole document Α Patent family members are listed in annex. Further documents are listed in the continuation of box C Special categories of cited documents T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international X* document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone filing date document which may throw doubts on pnorrty claim(s) or which is cited to establishthe publication date of another citation or other special reason (as specified) document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document referring to an oral disclosure, use. exhibition or other means document published prior to the international filing date but later than the pnorty date claimed &" document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 9 June 1999 23/06/1999· Authorized officer Name and mailing address of the ISA European Patent Office. P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040. Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Hart-Davis, J

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...ernational application No.

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Вох	Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This	International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. [Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
2. [Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out. specifically: see FURTHER INFORMATION sheet PCT/ISA/210
3. [Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Во	N Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This	s International Searching Authority found multiple inventions in this international application. as follows:
1.	As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.	As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.	As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.	No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
	The additional search fees were accompanied by the applicant's protest.
Ke	In a additional search rees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.
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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Claims not searched: 1-3, 5-7, 11-16, 19-21, 23, 25-29, 31, 33-36, 38, 40-44, 46-49, 51 (all partially unsearched)

The general terms "head group" and "crosslinking group" of independent Claims 1, 19 and 34, for which examples of extremely broad chemical scope are provided in Claims 15-16, 28-29, and 43-44, are so unclear as to render the above-mentioned claims unclear with respect to the scope of the matter for which protection is sought. These claims fail to comply with the requirements of Article 6 to such an extent that a complete meaningful search could not be carried out. Claims 1-3, 5-7, 11-16, 19-21, 23, 25-29, 31, 33-36, 38, 40-44, 46-49 and 51 were all searched in the light of Claims 4, 8-10, 17-18, 22, 24, 30, 32, 37, 39, 45, 50 and 52.

Information on patent family members

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